

Response
Application No. 10/573,456
Attorney Docket No. 062253

REMARKS

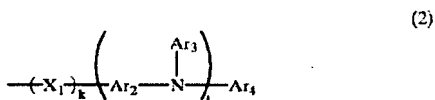
Claims 1-9 are pending. Claims 7-9 have been withdrawn from consideration.

Applicants' Response to the Claim Rejections under 35U.S.C. §102/103

Claims 1 and 2 are rejected under 35 U.S.C. § 102(a) as being anticipated by Takatani et al. (JP 2004-184569) herein Takatani. Applicants note that the effective date of Takatani is July 2, 2004. However, applicants have rights to priority based on JP App. No. 2003-340676 to September 30, 2003. All the limitations of claims 1 and 2 are supported by the disclosure in JP App. No. 2003-340676. As such applicants have perfected priority under 35 U.S.C. §119 by filing a verified English translation of the Japanese application herewith. Wherefore, applicants respectfully submit that Takatani has been removed as a prior art reference.

Claims 1-6 are rejected under 35 U.S.C. § 102/103 as being unpatentable over Doi et al. (US 2003/0064247) herein Doi. Applicants respectfully traverse. As set forth in applicants' claims 1, 3 and 5, the polyaminopyridines have a repeating structural unit represented by formula (1). As such, the claims involve a polymer spine comprised of formula (1), not merely a substituent within the polymer. Doi does not teach or suggest this feature of the presently claimed invention and requires a spine (main chain) comprised of different formulas (1) or (3).

The Office maintains that Doi teaches a polymeric structure represented by the formula:



See paragraph [0009].

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Specifically, the Office Action cites paragraphs [0021] and [0023] of Doi and asserts that the disclosure teaches that Ar₂ or Ar₃ may be a divalent heterocyclic compound such as pyridinedyl group or phenyl, naphthyl or anthryl. Based on this teaching, the Office concludes that Doi would read on formula (1) of applicants' claims 1, 3 and 5 when Ar₂ is a pyridinedyl and Ar₃ is a pyridinedyl or phenyl group. See page 4, top paragraph of the Office Action. However, applicants respectfully note that this formula of Doi does not teach the limitation of claims 1, 3 and 5 requiring a repetition structural unit as set forth in applicants' formula (1).

Doi is directed to a fluorescent substance exhibiting fluorescence is a solid state. The structure is comprised of repeating units of formulas (1) (--Ar₁--) and (3) (--Ar₅--). As described in the reference, Ar₁ is an arylene group or divalent heterocyclic compound having substituents represented by formula (2) (set forth above). Ar₅ is an arylene group or divalent heterocyclic compound as set forth in formulas (4) or (5) of Doi. See paragraphs [0008] to [0013].

The descriptions that the Office is referring to is discussing possible embodiments of the arylene group (paragraph [0021]) or the divalent heterocyclic compound group (paragraph [0023]) of formula 3 of the Doi compound. See paragraphs [0018] to [0023]. In regard to formula (2) of Doi which the Office Action cites to on page 3, this is a substituent of formula (1). Formula (2) does not comprise the spine of the polymer. Specifically, as set forth in paragraph [0010] of Doi, "l" in formula (2) represents an integer of 1 to 3. The exact structure of substituent formula (2) is described in good detail at paragraphs [0028] to paragraphs [0039] of Doi.

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Based on these disclosures of Doi, there is no teaching or suggestion in paragraphs [0021] and [0023] that Ar_2 or Ar_3 may be a divalent heterocyclic compound such as pyridinedyl group or phenyl, naphthyl or anthryl. In short, Formula (2) which the Office Action cites to is a substituent formula to formula (1) ($--Ar_1--$). See specifically paragraph [0026]. Since the spine (main chain) of the Doi's polymer comprised of the repeating units of formula (1) or (5) differs from that of the polymer of the present invention, claims 1-6 are neither anticipated by nor obvious over Doi.

Further, applicants note that the polyaminopyridines of the present invention are excellent in solubility in various solvents due to their chemical structure. However, Doi fails to disclose or teach solubility in various solvents and in some instances teaches away from highly soluble compounds. For example, when Ar_5 represents divalent heterocyclic compound group represented by formula (4), a person skilled in the art recognizes such a polymer has insufficient solubility because of its low freedom of molecular movement. Wherefore, there is no teaching in Doi which would lead the skilled artisan to modify the reference to attain the present invention.

In view of the above remarks and accompanying Declaration and verified English translation of JP App. No. 2003-340676, Applicants submit that the claims, as previously presented, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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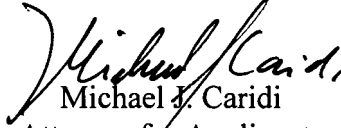
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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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Enclosure: Declaration